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PTO/SB/08A (08-03)

<b>Substitute for form 1449A/PTO</b>  <b>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b>  (use as many sheets as necessary)		<b>Complete if Known</b>			
		Application Number	09/724,548		
		Filing Date	November 28, 2000		
		First Named Inventor	Stephen R. Quake		
		Art Unit	1743		
		Examiner Name	Brian J. Sines		
Sheet	1	of	5	Attorney Docket Number	20174C-001120US

U.S. PATENT DOCUMENTS					
Examiner Initials*	Cite No. <sup>1</sup>	Document Number Number Kind Code <sup>2</sup> (if known)	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
BJS	A53	US-2,656,508	10-20-1953	Coulter	
	A54	US-3,560,754	02-02-1971	Kamentsky	
	A55	US-4,675,300	06-23-1987	Zare et al.	
	A56	US-4,786,165	11-22-1988	Yamamoto et al.	
	A57	US-4,908,112	03-13-1990	Pace	
	A58	US-4,963,498	10-16-1990	Hillman et al.	
	A59	US-5,032,381	07-16-1991	Bronstein et al.	
	A60	US-5,126,022	06-30-1992	Soane et al.	
	A61	US-5,140,161	08-18-1992	Hillman et al.	
	A62	US-5,164,598	11-17-1992	Hillman et al.	
	A63	US-5,271,724	12-21-1993	van Lintel	
	A64	US-5,434,049	07-18-1995	Okuno et al.	
	A65	US-5,452,878	09-26-1995	Gravesen et al.	
	A66	US-5,486,335	01-23-1996	Wilding et al.	
	A67	US-5,498,392	03-12-1996	Wilding et al.	
	A68	US-5,500,071	03-19-1996	Kaltenbach et al.	
	A69	US-5,512,131	04-30-1996	Kumar et al.	
	A70	US-5,558,998	09-24-1996	Hammond et al.	
	A71	US-5,580,523	12-03-1996	Bard	
	A72	US-5,589,136	12-31-1996	Northrup et al.	
	A73	US-5,632,876	05-27-1997	Zanzucchi et al.	
	A74	US-5,641,400	06-24-1997	Kaltenbach et al.	
	A75	US-5,661,222	08-26-1997	Hare	
	A76	US-5,702,618	12-30-1997	Saaski et al.	
	A77	US-5,716,852	02-10-1998	Yager et al.	
	A78	US-5,726,751	03-10-1998	Altendorf et al.	
↓	A79	US-5,750,015	05-12-1998	Soane et al.	

Examiner Signature	BJS.	Date Considered	12/14/2005
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BJS	A80	US-5,757,482	05-26-1998	Fuchs et al.	
	A81	US-5,800,690	09-01-1998	Chow et al.	
	A82	US-5,833,926	11-10-1998	Wurzel et al.	
	A83	US-5,837,200	11-17-1998	Diessel et al.	
	A84	US-5,852,495	12-22-1998	Parce	
	A85	US-5,856,174	01-05-1999	Lipshutz et al.	
	A86	US-5,863,801	01-26-1999	Southgate et al.	
	A87	US-5,869,004	02-09-1999	Parce et al.	
	A88	US-5,880,071	03-09-1999	Parce et al.	
	A89	US-5,904,824	05-18-1999	Oh	
	A90	US-6,117,634	09-12-2000	Langmore et al.	
	A91	US-6,221,654 B1	04-24-2001	Quake et al.	
	A92	US-2002/0037499 A1	03-28-2002	Quake et al.	
	A93	US-2004/0248167 A1	12-09-2004	Quake et al.	
	A94	US-6,833,242 B2	12-21-2004	Quake et al.	

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FOREIGN PATENT DOCUMENTS								
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		Country Code <sup>3</sup>	Number <sup>4</sup>	Kind Code <sup>5</sup> (if known)				
BJS	B20	EP	0 745 682	B1	12-04-1996	Bayer AG		<input type="checkbox"/>
	B21	EP	0 778 351	B1	06-11-1997	Hitachi, Ltd.		<input type="checkbox"/>
	B22	GB	2 264 296	A	08-25-1993	Zortech International Limited		<input type="checkbox"/>
	B23	GB	2 264 496	A	09-01-1993	United States Department of Energy		<input type="checkbox"/>
	B24	WO	91/13338	A2	09-05-1991	Hatfield Polytechnic Higher Education Corporation		<input type="checkbox"/>
	B25	WO	91/15750	A1	10-17-1991	Carimed Ltd.		<input type="checkbox"/>
	B26	WO	94/05414	A1	03-17-1994	The Regents of the University of California		<input type="checkbox"/>
	B27	WO	95/33846	A1	12-14-1995	Affymax Technologies N.V.		<input type="checkbox"/>
	B28	WO	95/33853	A1	12-14-1995	University of Tennessee Research Corporation		<input type="checkbox"/>
	B29	WO	97/02357	A1	01-23-1997	Affymetrix, Inc.		<input type="checkbox"/>
	B30	WO	97/38300	A1	10-16-1997	Soane Biosciences		<input type="checkbox"/>
	B31	WO	98/08931	A1	03-05-1998	BTG USA Inc.		<input type="checkbox"/>

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Substitute for form 1449B/PTO		<b>Complete if Known</b>	
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		First Named Inventor	Stephen R. Quake
		Art Unit	1743
		Examiner Name	Brian J. Sines
Sheet 4 of 5	Attorney Docket Number	20174C-001120US	

NON PATENT LITERATURE DOCUMENTS			
Examiner Initials *	Cite No. <sup>1</sup>	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T <sup>2</sup>
BJS	C162	AFFHOLTER, JOSEPH et al., "Engineering A Revolution," Chemistry in Britain, pp. 48-51, 4/1999	
	C163	ARNOLD, FRANCES H., "Design By Directed Evolution," Accounts of Chemical Research, Vol. 31, No. 3, pp. 125-131, 1998	
	C164	BEIN, THOMAS, "Efficient Assays For Combinatorial Methods For The Discovery Of Catalysts," Angew. Chem. Int. Ed., Vol. 38, No. 3, pp. 323-326, 1999	
	C165	BUDOWLE, BRUCE et al., "Analysis Of The VNTR Locus DIS80 By The PCR Followed By High-Resolution PAGE," Am. J. Hum. Genet., Vol. 48, pp. 137-144, 1991	
	C166	CHOU, HOU-PU, "Microfabricated Devices For Rapid DNA Diagnostics," Doctoral Thesis, California Institute of Technology, pp. i-xii and 1-106, 5/30/2000	
	C167	CROSLAND-TAYLOR, P. J., "A Device For Counting Small Particles Suspended In A Fluid Through A Tube," Nature, Vol. 171, pp. 37-38, 1/3/1953	
	C168	GIUSTI, ALAN et al., "Application Of Deoxyribonucleic Acid (DNA) Polymorphisms To The Analysis Of DNA Recovered From Sperm," Journal of Forensic Science, Vol. 31, No. 2, pp. 409-417, 4/1986	
	C169	HANES, JOZEF, et al., "In Vitro Selection And Evolution Of Functional Proteins By Using Ribosome Display," Proc. Natl. Acad. Sci. USA, Vol. 94, pp. 4937-4942, 5/1997	
	C170	HERMANSON, Greg T. et al., "Chapter 2 - Activation Methods," Immobilized Affinity Ligand Techniques, Academic Press, pp. 2 cover pages, 51-136, 1992	
	C171	HOFFMULLER, ULRICH et al., "In Vitro Evolution And Selection Of Proteins: Ribosome Display For Larger Libraries," Angew. Chem. Int. Ed., Vol. 37, No. 23, pp. 3241-3243, 1998	
	C172	JEFFREYS, ALEC J. et al., "Hypervariable 'Minisatellite' Regions In Human DNA," Nature, Vol. 314, pp. 67-73, 3/7/1985	
	C173	JERMUTUS, LUTZ, et al., "Recent Advances In Producing And Selecting Functional Proteins By Using Cell-Free Translation," Current Opinion in Biotechnology, Vol. 9, pp. 534-548, 1998	
	C174	JU, LI-YA et al., "Application Of Silver Staining To The Rapid Typing Of The Polymorphism Of HLA-DQ Alleles By Enzymatic Amplification and Allele-Specific Restriction Fragment Length Polymorphism," Electrophoresis, Vol. 12, pp. 270-273, 1991	
	C175	KANTER, EVAN et al., "Analysis Of Restriction Fragment Length Polymorphisms In Deoxyribonucleic Acid (DNA) Recovered From Dried Bloodstains," Journal of Forensic Sciences, Vol. 31, No. 2, pp. 403-408, 4/1986	
	C176	MOLDAVAN, ANDREW, "Photo-Electric Technique For The Counting Of Microscopical Cells," Science, Vol. 80, No. 2069, pp. 188-189, 8/24/1934	
	C177	MURRAY, VINCENT et al., "Detection Of Polymorphisms Using Thermal Cycling With A Single Oligonucleotide On A DNA Sequencing Gel," Human Mutation, Vol. 2, pp. 118-122, 1993	

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BJS	C178	NAKAMURA, YUSUKE et al., "Variable Number Of Tandem Repeat (VNTR) Markers For Human Gene Mapping," Science, Vol. 235, pp. 1616-1622, 3/27/1987	
	C179	ROBERTS, RICHARD W. et al., "RNA-Peptide Fusions For The <i>In Vitro</i> Selection Of Peptides And Proteins," Proc. Natl. Acad. Sci. USA, Vol. 94, pp. 12297-12302, 11/1997	
	C180	ROUHI, MAUREEN, "Sizing, Sorting DNA One Piece At A Time," C&EN, pp. 5-6, 1/11/1999	
	C181	TATARI, ZOHREH et al., "HLA-Cw Allele Analysis By PCR-Restriction Fragment Length Polymorphism: Study Of Known And Additional Alleles," Proc. Natl. Acad. Sci. USA, Vol. 92, pp. 8803-8807, 9/1995	
	C182	TAWFIK, DAN S. et al., "Man-Made Cell-Like Compartments For Molecular Evolution," Nature Biotechnology, Vol. 16, pp. 652-656, 7/1998	
	C183	VAN DILLA, M. A. et al., "Cell Microfluorometry: A Method For Rapid Fluorescence Measurement," Science, Vol. 163, pp. 1213-1214, 3/14/1969	

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